

Amendments to the Specification, Abstract and Parts List

Please replace paragraph [0027] with the following amended paragraph:

[0027] FIG. 4 is an enlarged cross section view of the sensing mat 18 along line 4-4 of FIG. 3 showing the layered construction including alternating electrical conductor, electrode, and electrical insulator layers suitably fashioned where a suitable adhesive or other bonding means is incorporated (not shown) to bond the conductor, electrode and insulator layers together substantially into a structure which maintains integrity and suitable electrical and physical qualities even when not assuming an entirely planar shape. The sensing mat 18 electrically connects to the sensor circuit 22 incorporating a charge-transfer touch integrated circuit 54 (FIGS. 6a-6b) which fosters projection of a capacitive sense field around a conductive sense electrode 52 central to the sensing mat 18. The charge-transfer touch integrated circuit 54 can be a ~~QT310~~ QT310™ capacitive sensor ~~IC~~ integrated circuit (IC) (from ~~Quantum Research Group~~ QUANTUM RESEARCH GROUP®) utilizing a proprietary charge transfer sensing algorithm. Disruption or change of the capacitive sense field about the conductive sense electrode 52 connected to the SNS1 terminal of the charge-transfer touch integrated circuit 54 in the sensor circuit 22 is detected to signal swimmer departure. The behavior of the capacitive sense field about the sensing mat 18 is influenced by the conductive exterior layer 50 to evenly distribute the capacitive sense field projected by the conductive sense electrode 52 for uniform sensing and to diminish the capacitive sense field to ensure that the conductive sense electrode 52 will be sensitive to touch and not mere proximity. A conductive ground electrode 56 opposes the conductive sense electrode 52 with an insulator layer 58 disposed therebetween. The conductive ground electrode 56 in opposition to the conductive sense electrode 52 increases the overall capacitance across the sensing mat 18 to ensure a suitable response time as well as to shield the conductive sense electrode 52 from sensing nuisance touches in the underside region of the relay takeoff swimming platform 16. The conductive ground electrode 56 connects to the ground (Vss) of the sensor circuit 22. An insulator layer 60 is included on the underside of the conductive ground electrode 56 to insulate the conductive ground electrode 56 from a

mounting surface such as provided by the relay takeoff swimming platform 16. Another insulator layer 62 is provided between the conductive sense electrode 52 and the conductive exterior layer 50 to insulate the conductive sense electrode 52 from the conductive exterior layer 50 as well as to provide protection of the conductive sense electrode 52. In the alternative, composite material can be incorporated into use in lieu of the conductive sense electrode 52, the insulator layer 58, and the conductive ground electrode 56, such as ACM (aluminum composite material), such as ALUCOBOND®. ACM includes a top layer of aluminum, a bottom layer of aluminum, and a polyethylene layer affixed therebetween forming a laminate. The top layer of aluminum corresponds to the conductive sense electrode 52, the polyethylene layer corresponds to the insulator layer 58, the bottom aluminum layer corresponds to the conductive ground electrode 56, and, if incorporated, a layer of paint applied to the upper surface of the top layer of aluminum corresponds to the insulator layer 62. The use of such a pre-formed laminate is beneficial in decreasing fabrication time.